
SENATE RESOLUTION

REQUESTING THE DEPARTMENT OF EDUCATION TO CONVENE A WORKING GROUP TO IDENTIFY FACTORS AND RESOURCES NEEDED TO SUSTAIN CURRENT AND FUTURE ROBOTICS PROGRAMS WITHIN THE DEPARTMENT OF EDUCATION.

1 WHEREAS, robots and robotic technologies represent a
2 practical application of physics, computer science, engineering,
3 and mathematics and provide a very powerful and flexible
4 approach to demonstrate a variety of engineering concepts; and
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6 WHEREAS, robotics appeals to a broad range of interests and
7 allows multiple points of access to science, technology,
8 engineering, and mathematics for many types of learners; and
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10 WHEREAS, robotics technology and robots are being used by
11 an increasing number of educators at the college level to
12 reinforce computer science and engineering theory and to teach
13 basic software and mechanical engineering at the elementary,
14 middle and intermediate, and high school levels; and
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16 WHEREAS, robots and robotic technology catalyze an interest
17 in science and increase self-esteem, as well as teach basic life
18 skills such as problem solving, decision making, goal setting,
19 and logical thinking; and
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21 WHEREAS, Hawaii can serve as a model of coordination of a
22 full range of robotics education opportunities from elementary
23 through college and provide templates for initiating such
24 efforts elsewhere; and
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26 WHEREAS, many Hawaii schools have robotics teams, but there
27 are still many constraints on funding, resources, and
28 instructors that prevent some schools from building robotics
29 programs and recruiting students; and
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31 WHEREAS, in order to improve science education in the State
32 and increase opportunities for students to participate in



1 robotics, it is necessary to identify the most relevant factors
2 and resources needed to sustain current and future robotics
3 programs in public schools; now, therefore,
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5 BE IT RESOLVED by the Senate of the Thirtieth Legislature
6 of the State of Hawaii, Regular Session of 2019, that the
7 Department of Education is requested to convene a working group
8 to identify factors and resources needed to sustain current and
9 future robotics programs within the Department; and
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11 BE IT FURTHER RESOLVED that the working group is requested
12 to evaluate the following:
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- 14 (1) The current state of robotics in Hawaii from
15 kindergarten to post-secondary education;
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- 17 (2) Identifying and describing factors that have
18 initiated, sustained, and created increasing access
19 for student participation in scholastic robotics and
20 factors that have been barriers to initiating and
21 sustaining programs and expanding access for student
22 participation;
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- 24 (3) Identifying and describing the resources needed to
25 sustain the current and future robotics programs;
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- 27 (4) Identifying the means to track student participation
28 to document the role scholastic robotics has on
29 college and career readiness and career choices;
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- 31 (5) Identifying the opportunities for leveraging Hawaii
32 scholastic robotics for hosting annual national and
33 international scholastic robotics competitions,
34 exhibitions, and exchange programs with Pacific Rim
35 partners to foster technology-based tourism and
36 collaboration among countries; and
37
- 38 (6) Other relevant issues as determined by the working
39 group; and
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41 BE IT FURTHER RESOLVED that the working group is requested
42 to include the following members:



- (1) The state STEM and career technical education specialists and representative complex resource STEM and career technical education teachers from the Department of Education;
- (2) Assistant Dean of the College of Engineering at the University of Hawaii at Manoa, or the Dean's designee;
- (3) The statewide coordinators, or designated representatives, for the Hawaii scholastic robotics programs that have national and international affiliations, such as FIRST Robotics, VEX Robotics, underwater ROV, drone, and other identified programs;
- (4) Representatives from the Hawaii Tourism Authority and Hawaii Convention Center;
- (5) Representatives from identified work force development and new business development groups, including the Department of Labor and Industrial Relations and Hawaii Technology Development Corporation;
- (6) Representatives of private industry that have provided grant funds to support robotics through their foundations;
- (7) A representative from the Office of Aerospace Development; and
- (8) Classroom teacher representatives who foster STEM using robotics as tools for after-school or in-class programs from the islands of Kauai, Lanai, Maui, Molokai, Oahu, and Hawaii island; and

BE IT FURTHER RESOLVED that the working group is requested to submit a report of its findings and recommendations, including any proposed legislation, to the Legislature no later than twenty days prior to the convening of the Regular Session of 2020; and



1 BE IT FURTHER RESOLVED that certified copies of this
2 Resolution be transmitted to the Chairperson of the Board of
3 Education, Superintendent of Education, Director of Labor and
4 Industrial Relations, President and Chief Executive Officer of
5 the Hawaii Tourism Authority, Executive Director of the Hawaii
6 Technology Development Corporation, Director of the Office of
7 Aerospace Development, Assistant Dean of the College of
8 Engineering at the University of Hawaii at Manoa, Statewide
9 Coordinator for VEX Robotics, and Statewide Coordinator for
10 First Robotics.

